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### CASE OF STRICTURE OF THE COLON, EXISTING FOR MANY YEARS.

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For many years I had occasionally attended Mrs. N. P., a woman naturally of a slender constitution and nervous temperament, and when I first knew her for several years a subject of confirmed ill health, laboring under a chronic derangement of the digestive organs, which Marshall Hall includes within the group of maladies he has called Mimoses. She was thin, and looked worn and haggard for her years, which were not above six or seven and twenty. Her skin was sallow, her appetite irregular, digestion frequently painful or imperfect, and bowels irregular, with a general tendency to constipation; tongue pale, and frequently coated with a thin, dirty-looking mucosity. She had tried many physicians and many remedies, but was wanting in the energy and perseverance necessary to pursue any course effectively. When I was called in any more acute paroxysm of her complaint, I could readily in a few days get the exaggerated symptoms substantially relieved, but when she had regained her usual miserable state, I found it in vain to expect or persuade her to do anything more, and was forced to content myself with then leaving her to her own guidance.

In the latter part of the year 1843, I was called to her in one of these exacerbations, which she had not experienced before for a year previous. The medicines that I gave her to free the bowels, brought away two or three lumbrici. This circumstance made a strong impression upon her hypochondriacal feelings, and she conceived that the whole of her troubles was owing to some great collection of these parasites, and was urgent with me to take effectual and active measures to exterminate them. I represented to her that it was altogether probable that the presence of these was but accidental, and that though they might have increased the difficulties under which she labored, they were by no means the cause of them; and that any very active remedies, frequently used in such cases, were altogether unsuited to the state of her digestive organs, and would be productive of injury.

A course of gentle alterative and tonic medicine was prescribed for her, under which she was gradually recovering her usual state of health,

when she thought it expedient to change her physician for a young man who had lately come into the town, giving himself out to be considerably above the common run of physicians in skill and acquirements; and as, in addition to thus "blowing a long trumpet," he also "rode a sectarian horse," some were found to give full credit to his professions, and it was recommended to my patient, by some officious neighbors, to employ him, with the assurance that "he would give her a good dose or two that would set her up at once." He was accordingly sent for, and I took my leave.

It was soon pronounced that the patient was afflicted with a tape worm, and all the pungent anthelmintics and drastic purgatives, that had been found efficacious in such cases, were put in requisition, to the great distress of the patient, but not to the destruction of the worm, though it was said that from time to time great quantities of it came away. Still no relief ensued, and something was wanted to establish the reputation of the doctor. There happened at that time to be a professor of mesmerism in the neighborhood, and he was asked to give his assistance in the matter. A susceptible female was accordingly magnetized, and being put in communication with the sick person, she said that she saw coiled up, in the person's intestines and stomach, a long reptile, with four red eyes and a large mouth, the head of which was occasionally erected towards the throat, with open mouth, as if seeking for food; but that when anything medicinal or nauseous was swallowed by the patient, the mouth was closed, and the head bent downwards, while if anything sweet or good was swallowed, the reptile imbibed it with eagerness.

This was deemed a fair description of a tape worm, and an undeniable confirmation of the doctor's diagnosis. The mesmerizer, according to the usual formula in such cases, was then required to indicate the proper and necessary means of dislodging this unwelcome inhabitant from the stomach, of which it had so unceremoniously taken possession. The means prescribed were to get the reptile thoroughly intoxicated by a large potion of sweetened spirit, of which it was declared to be very fond, and while sleeping off its festive debauch in happy unconsciousness and incapable of making resistance, to assail it with a powerful dose of physic, by which it would straightway be dislodged from its domicil, and hurried, *nolens volens*, into the outer breathing and lightsome world. Notwithstanding a considerable temperance excitement at that time, it was thought exceedingly proper that a tape worm should get drunk, and accordingly a very large potion of good N. E. rum, well sweetened with molasses, was exhibited, and in due time, when the worm might be supposed to be enjoying its *siesta*, it was followed by an equally liberal portion of spirits of turpentine, subsequently re-inforced by some active cathartic. A very active effect was produced upon the bowels, and a large quantity of something long was discharged, which was declared to be the principal portion of the tape worm, and was triumphantly seized and bottled up in a portion of the same treacherous spirit which had decoyed it to its end.

But notwithstanding the jollification of the tape worm, and his subse-

quent "enticement" from his lodgings, the patient, so far from being better, rather seemed the worse for the proceeding. The bowels were more irregular and troublesome than ever, her general sufferings were much augmented, and from time to time, under the operation of purgatives, large quantities of what were called "cut up" portions of the tape worm were passed, even in increasing quantities, showing how formidable and endless must have been the dimensions of the reptile, a sort of intestinal kraken. This state of things was supposed to require a further exhibition of expulsive remedies, and they were given without any change of symptoms, save from bad to worse, till at last the unfortunate woman believed herself, and was believed by her friends, to be moribund, and further medication was given up as useless, and the doctor desisted, from his well-meant, doubtless, but ineffectual endeavors to rid her of the remains of his unconquered opponent, after the siege had lasted some three or four months.

When relieved of the physician, nature, however, showed herself able in some degree to contend with her other enemies, and Mrs. P. gradually recruited somewhat in strength, and obtained a more endurable degree of suffering. After a few weeks I was sent for to attend another of the family, and my former patient, after some expressions of regret for past occurrences, intimated a wish to have me do something for her, if anything could be done to alleviate her condition, for recovery, or even any long continuance of life, she did not seem to expect. I was then made acquainted with the foregoing particulars amongst others, and the carefully-preserved remains of the supposed tape worm were produced for my examination. These I found to consist of a ragged flocculent rope of dense mucus, about the bigness of my little finger, semi-transparent and apparently in places somewhat tubular in structure, though so much twisted and shrunken that it was difficult to ascertain this. The length of it was about three feet. It bore no resemblance whatever to a tape worm, or to any organized structure. I found, upon inquiry, that large quantities of a similar substance, "in strips," as the woman expressed it, were passed at every movement of the bowels, which usually took place every two or three days, sometimes oftener. Upon the examination of these discharges, I found them to consist of a quantity of thin, watery, feculent matter, with here and there small pellets of greater substance, mixed with a large quantity, half a pint or more, of this same mucus, in long, tenacious shreds, often more or less twisted, ragged and irregular; the length of many of these shreds was ten or twelve inches, and even more. They resembled very exactly in general character the mucous strings that may be found in a basket where a dozen or two of large lively eels have been confined for a few hours. There was no doubt that it was a secretion from the mucous membrane of the bowels, in a state of intense and peculiar irritation, accompanied with great vermicular action. Upon the most minute inquiry and examination, I could not find that anything like the gourd-seed-shaped fragments of the taenia were or ever had been observed in the alvine evacuations.

The general state of the patient was bad. She was much emaciated, her

countenance sallow, with a haggard and melancholy expression ; her appetite was very poor, and digestion painful ; she complained much of constant soreness of the mouth, and severe smarting, both in the mouth and throat, upon taking anything, however mild and simple, into the mouth or swallowing it. The tongue, however, was but slightly coated, and with a whitish slimy fur, nor were any ulcers or aphtha to be seen. The under side of the tongue was complained of particularly, and the surface looked shining and irritable, though not more highly colored than usual. She also complained of a constant nauseous taste in the back part of the mouth and throat, and the breath was fetid. She said that she experienced great distress after taking any food, however simple, or even the mildest drinks, but that her greatest suffering was from an almost constant sensation of burning heat in the abdomen, together with a twisting and rolling sensation, and sharp, pungent, lancinating pains, which two last symptoms she referred to the crawling of the tape worm, and to its biting her " insides." The act of defæcation was attended with much suffering, from tenesmus, and heat and pain in the rectum. There was also dysuria, and the urine was scanty, fetid and turbid. She also complained much of a lump, as she called it, or what felt like it to her, in the intestines, sometimes stationary, sometimes moving about, ascending to the stomach and up the throat partially, with a choking sensation. This she believed to be the tape worm crawling after food, or coiled up to rest himself. The existence of any such inmate I firmly believed to be altogether apochryphal, from the absence of the physical signs, for I did not believe that any worm of that species would have sustained the enormous dosing the poor woman had undergone, without losing at least occasionally some of his " tail," to furnish ocular and tangible proof of his existence. Many of the symptoms, moreover, were clearly hysterical. These things I represented to her in the best way I could, to operate favorably upon her mind, so as if possible to calm it somewhat, and to assist my efforts to benefit her in other ways. But though I partially, in this way, dispelled her belief in the tape worm, it was not to change it for the better. She had unluckily read or heard of some woman who had swallowed a snake in its embryo state, in drinking from a spring, and being confirmedly and wretchedly hypochondriacal, nothing would do but that she must believe that if there was not a tape worm, there must at least be a snake or a newt, which she had swallowed in its very tender infancy, having been accustomed for many years to get water for drinking from an open spring.

After carefully studying the case for some time, and observing closely the effects of the various gentle medicines with which I endeavored to restore the healthy action of the digestive organs, I came to the conclusion that there existed, in the course of the intestines, one or more, probably the latter, places where the passage was considerably narrowed and constricted, with a thickened and unyielding state of its coats, and a highly irritated state of the mucous lining, giving rise to this immense secretion of inspissated and almost membraniform mucus. Superadded to this was the old Mimotic complaint, and a great degree of hysteria,

with some spinal irritation, and from some symptoms I was led to fancy there might be some scirrhus forming—where, I could not determine, so obscure were the symptoms. The peculiar state of the intestines I could not but refer to the action of the severe means used for the expulsion of the supposed tape worm, and such indeed was the opinion of the woman herself; for though, for a long time, I could not persuade her but that there was some live creature in her bowels, yet she always affirmed that there were some feelings that she never experienced before taking some of the doses, and that she should always believe that those doses were the cause of them.

I labored for some months in endeavoring to help her, and for a time with partial success, restoring her to some degree of appetite and greater ease of digestion, obtaining a more easy and natural state of the alvine evacuations, in which the mucous strips only made their appearance occasionally, and then in much less quantity. But the patient's mind, never very strong, was, with her nerves, completely shattered by the sufferings she had undergone, and was still undergoing. She became a confirmed hypochondriacal monomaniac on the subject of her disease; and though, from my repeated asseverations of my disbelief in the supposed existence of any living reptile within her, and my repeated explanations and statements of what I considered the real nature of the case, she finally ceased saying anything to me about it, yet she, I think, never gave up the belief, and made me promise that when she died I would examine her body to ascertain the cause of her sufferings. Finding, too, that from my view of the case a cure could not be expected, and weary of, and disgusted with, taking medicine, she finally refused to take any more, wishing, she said, to die, and would only now and then submit to some external application to relieve any extreme distress. In this wretched state, however, she survived for nearly four years, and among the last things she mentioned, before her death, was the desire to have me examine her body after her decease. This I did the next day.

The corpse was very much emaciated. Upon opening the abdomen, the stomach appeared to be rather contracted in breadth, with its coats generally a little thickened, but flexible and soft, and not otherwise unhealthy. The pyloric orifice was in a natural state. The duodenum, jejunum, ileum and cœcum were in good condition. The colon was firmly united to each flank by old adhesions, which could be overcome only by the knife. The ascending colon had in it two strictures of three or four inches each, where its calibre was so contracted as with difficulty to admit the end of my little finger; the arch of the colon was tolerably healthy, though its coats were somewhat thickened, and it contained a small quantity of thick faecal matter. Almost the whole of the descending colon was very much contracted, as much so as on the right side, and in these places the coats were greatly thickened, and upon opening them the mucous membrane was found covered with the inspissated mucus of which such quantities had been voided. The rectum was also more contracted than natural, and its coats thickened. The uterus seemed natural, as also the bladder. No particular organic change

was observable in the liver, but the gall-bladder was rather larger than usual, and distended with bile of a dark-green color. The kidneys were enveloped with little else than loose cellular membrane, but seemed somewhat harder than natural, and a very small quantity of what seemed pus was found in the pelvis of one of them. The spleen presented no unusual appearance, but the pancreas was somewhat enlarged and much indurated, appearing scirrhouss throughout. The whole extent of the intestinal canal, from the oesophagus to the rectum, was carefully examined, but no worm or reptile of any kind made its appearance.

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**ETHERIZATION—A COMPENDIUM OF ITS HISTORY, SURGICAL USE,  
DANGERS, AND DISCOVERY.**

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EQUALLY futile were the objections to the new and patent method upon the ground of quackery and professional etiquette. Such considerations should fall before a question of this magnitude; and as to the fact, professional custom does not sanction such objections.

A few words upon the patent may not be here inappropriate. Discoverers in art tax the world for a pecuniary equivalent. In the higher atmosphere of science, which deals with abstract truth, it is not easy, nor is it usual, thus to extort a value for any application growing out of discovery. It is well that a line should be drawn between discoveries in pure science, which enlarges the sphere of the intellect and the boundaries of permanent knowledge, between such discovery and the transitory and less disinterested labors directed to the amelioration of a narrower circle and a briefer term.

It does not harmonize with our better impulses, that a great invention in the art of relieving human suffering should be in any way conditional. I believe that nations would have emulated each other in meeting any liability generously abandoned to them as a debt of honor. Yet it should be remembered that the question of patent is very insignificant compared with the discovery itself, or the gratitude due to it. Besides which, secrets are common, and perhaps justly so, in the profession with which this discovery had an intimate connection in its early history, and a patent there is not a subject of comment.

Some of the Journals seem to have been indignant at the announcement of this patent by a regular physician. I investigated and published some of the first experiments by the permission of those concerned in making them, and announced the patent with its extenuating circumstances at their stipulation. That the patent was an error of judgment as well as a violation of custom, I had no doubt; I vainly endeavored, as far as my very humble influence might weigh, to prevent the final measures for procuring it. I even urged an appeal to interest; the force of which has been fully verified in this case; viz., that when the burden

of sustaining a patent falls on the patentee, and not upon the violator of the patent, nor upon the government who grants it, an invention may be so valuable as to be worthless to the patentee in a pecuniary point of view. In other words, the encroachment of the multitude may become too formidable for the resistance of an individual.

Finding such expostulation of no avail, and as an humble instrument in the announcement of a great discovery, I did, what I should be most ready to do every week, if, by so doing, I were able to accelerate, even by a few days only, the ability of the world to relieve human suffering. Those who were most indignant at the patent, seem to have been slowest to grant ether to their patients. Let us hope that such nice discriminators have not more to lay to their consciences, than a violation of professional etiquette, like that of announcing and using a patent right, by which a man is lulled to slumber while his leg is amputated.

A want of ability has been displayed in confounding the questions of ether patent and ether inhalation. Those who have declaimed against the ether patent, upon this side of the Atlantic, have found it very difficult to give a candid hearing to the separate question of ether insensibility. But it was not so abroad. In England, scientific discrimination far outweighed any discreditable feeling of prejudice or jealousy. The very unimportant question of patent was soon at rest. This error of custom or of taste was forgotten; and the united scientific world abandoned themselves to a determination of the real value of the discovery. No opportunity for experiment was lost; no evidence rejected. The whole medical community gave themselves to the work, and in a short time most honorably avowed that the discovery of etherization was not second to the discovery of their own Jenner. Let us believe that in the country of its birth, prejudice against ether inhalation will now yield to a recognition of its value.

Why was the discovery not made before? Why did no one discern the value of the toy which had attracted the attention of so many?

Because the human mind is fettered by long custom. It runs in the channels of routine. First diverted from its course by some little obstacle its current swells and deepens, bearing down solid opposition that it may roll tranquilly in its distorted bed. Watch the tide of human footsteps, guided by the mind of successive generations. The pathway turns here and there to avoid some little inequality, and the old man and the child follow the winding track. Mind follows where mind has been. Few turn aside to analyze the difficulties which discouraged others. That a thing has not been, is to most men, perhaps justly, a reason why it will not be; and here is the office of philosophic incredulity which doubts the track of custom.

It is quite obvious that such incredulity may emanate from widely differing sources. It often grows out of depth and originality of intellect; of capacity which takes a wide and general view, discovering imperfection in mode or in material.

On the other hand, as he who is ignorant of a path may make the

shortest route from point to point, so one who is not familiar with the erroneous conclusions of previous knowledge, may first trace a true result. In such a case ignorance of error is an accidental vantage ground, which places its man considerably nearer truth, than that occupied by prejudice based upon error.

I hold that such incredulity, whether of knowledge or of ignorance, is likely to indicate a philosophic mind. It proposes to think for itself. Its experience of the world has shown it that the world may be wrong. Its experience of its own abilities has taught it to respect itself. For example, Whitney was said to form his decisions, not after the model of common opinion, but by his own nicely-balanced judgment. Perhaps in some details, humble though they be, such a mind has seen the defect of others' judgment, and has had cause to prefer its own results; and thus instructed, turns to a new subject, determined to win its own experience, to make its own investigation.

Such incredulity, brought to bear upon an extended system, especially in the sciences, is justly viewed with suspicion; and the reformer in politics, in the social system, or in medical science, meets no enthusiastic greeting. A little zeal, with a little error of premises or of reasoning, may then make the reformer dangerous. Here, the *experimentum crucis* cannot easily be tried, either from the number of elements in the problem, from the length of time required, or from the magnitude of the interests at stake; and the world therefore very justly maintains a degree of conservatism and immobility, in its moral, social and political relations.

In the exact physical sciences, the tenets of a reformer may be easily tested. Here the logician easily supplies himself with facts. The result of single and brief experiments made at will, can admit of little doubt. Even in the obscurer parts of medicine, where the material and immaterial influences are numerous and sometimes inappreciable, every honest and logical mind must, upon points of importance, arrive at one and the same result. No danger can result from incredulity in medical science. On the contrary, in view of the errors of fact which grow out of want of time or qualification on the part of observers, or the intrinsic difficulties of the science, a healthy and vigilant skepticism of recorded facts, whether in diagnosis or in therapeutics, is one of the essential methods of its advancement.

It is quite obvious that such incredulity and rejection of recognized authority, occupies a merely negative position. It is a quality which adapts its possessor for the reception of new light, from which the act of invention may emanate. But that such act should in reality occur, certain active faculties are requisite. Positive inventive talent is required; the nature of which I shall attempt to show. But let it be remembered that there is a partial substitute for talent. It has been said that the difference between men is more in their power of application, than in talent. Great application, resulting from strong stimulus, will be readily allowed to bring about results, much like those of talent. At any rate, it is more nearly allied to the untiring zeal and stern energy which recognizes no obstruction to its march. It is well known that this unyield-

ing perseverance has characterized a large proportion of inventors; it has animated them in failure, and nerved them through adversity. Of Whitney, whose cotton gin, even fifteen years ago, was said to be demonstrably worth 100,000,000 dollars to the United States, it was said, "of all my experience in the thorny profession of the law, I never saw a case of such perseverance, under such persecution. Even now, after thirty years, my head aches, to recollect his narratives of new trials, fresh disappointment and accumulated wrongs." Fulton's energy was marvellous. His experimental boat was completed after inconceivable difficulties in the spring of 1803, when a messenger announced that the "boat had broken in pieces and gone to the bottom." After a momentary despondency, which till then he had never felt, and without returning to his lodging, without rest or refreshment, he labored with his own hands to raise her, during twenty-four hours incessantly. To this imprudence he attributed much of his subsequent bad health. The boat was almost entirely re-built, and was again completed in July. I take Fulton, Whitney and Arkwright as types of the mechanical inventor. They possessed, in an eminent degree, the inventive talent, but this did not predominate over determination and perseverance, as not unfrequently happens when such talent is exaggerated. Of Whitney's power of invention, it was said, "it never ran wild; it accomplished, without exception, all that he ever asked of it, and no more. I emphasize this last expression, from having in mind the case of a man, whose inventive power appeared to be more fertile even than Whitney's, but he had it under no control. When he had imagined and half executed one fine thing, he darted off to another; and he perfected nothing. Whitney perfected all he attempted."

Such energy, vital to the existence of most discoveries, may grow out of either the inventor's sense of the necessity, or his conviction of the possibility of reaching his object. And the last is another agent, mysterious to many, which is allied to the incredulity before alluded to, and which eminently characterizes the inventor's mind. It may be defined as a belief in the possibility, or certainty, of producing a result attained by the more active perception and reflection of the inventor's mind, by a series of processes which he may be, and often is, totally unable to impart. He is often, in consequence, considered as unsound or unwise; for as far as the subject in hand is concerned, the inventor is actually ahead of the world. His faculties may not be recognized as stronger, his character more forcible, his intellectual range broader, nor his knowledge of experience greater, than those of other men. Yet for the narrow point at issue, he is more competent than any other. His perceptions are stimulated and brought to a focus; and his energy is hot. He may actually become a better instrument for a special purpose, than another whose intellectual mechanism is far more complicated. Franklin in an essay before the American Philosophical Society, gave a drawing of a water-wheel, accompanied by a demonstration, conclusive as he supposed, that such wheels could not be used to advantage in propelling steamboats. He proposed a jet from the stern. Fulton proved that

among all methods proposed, the jet was the worst, and the wheel the best. Fulton was right, and not Franklin.

The power of remodelling old forms, of abbreviating method, of devising and economizing force for the passage of trodden or untrodden paths, appears to me essentially the same in most of the vocations of the human mind. Superadded to it, may be a taste or a talent for the combinations of mechanical or other force, or for the complicated details of number and of space, or for any other of the fields of science. But how often is a mind simultaneously given to various inventive fields; exhibiting its powers in various directions, and intuitively recognized and stigmatized by the world as having a genius which incapacitates it for the daily routine of life. And how many, like Newton or Franklin, who added the element of perseverance to this genius, have been distinguished for a versatility of talent, manifesting itself each year in a new field, and exhibiting in each its peculiar trait. Franklin was a reformer; Fulton a warm advocate of the principles of free trade; while Whitney, in his college compositions and in the words of his biographer, "with a spirit somewhat prophetic, anticipated the decline and overthrow of all arbitrary governments, and the substitution in their place of a purely representative system like our own."

The inventor invents or devises the means to attain his ends. He is, therefore, most likely, other things being equal, to be a discoverer, because he will best devise the instruments, material or abstract, to cross-examine nature, and discover abstract truth. Yet it often happens that an inventive talent confines itself to the exposition of mechanical truths of limited application; not demonstrating large and suggestive laws in science, but settling limited questions of expediency in art; or making combinations, as Newton did his watch, for the intellectual pleasure of it.

Such mechanical talent as that of Fulton and Whitney, and hosts of others, whose names are or are not attached to great inventions and discoveries, is not the less because it remained circumscribed by the field of mechanical force, to which it first addressed itself. The modifications of mechanical force do in fact afford an ample field to such intellect. But give opportunity to such men as Fulton, or to a thousand nameless artizans, whose talent is valued at more than gold by those who convert such knowledge into money; find some way of detecting this humble genius and give to it the opportunity for education in science and unmerchandiseable truth, which may take the place of natural strong taste for it, and we should have true philosophers. Newton built a watch and discovered the law of gravitation; having a rare genius for arithmetic computation. But contrive some way to breed the true inventive talent into a taste or talent for the different branches of science, and we should have more Newtons.

I do not think I over-estimate this talent for expedients and resources. What is American ingenuity? It is this great talent seeking a field in mechanical combinations in a country where opportunities for scientific knowledge have been hitherto comparatively rare. The elements of

American ingenuity constitute the perception, the discrimination, and the resources of the American people.

The true power of originating, wherever manifested, is the combined result of a power of analysis and a power of combination ; the former enabling the inventor to discover the differences between the elements of existing combinations, to detect the influence of each, and to reject the useless, while the latter perceives the relations of new elements to the problem, and invokes their agency in the new combinations. The intellectual philosopher may justly recognize in these faculties, the agency both of powerful judgment and of the imaginative quality ; both brought to bear upon a range of subjects with which their possessor is familiar. The fact that inventors thus endowed with discrimination often manifest so little of it in worldly matters, may be explained by the consideration that the perception of differences does not afford to the inventor a pleasure which leads him to seek new and wider fields for its exercise, especially where a knowledge of new and perhaps distasteful details is required.

It has been conceded that this talent is peculiar ; often an uncultivated gift, brought to bear upon some narrow range of material, by those whose general knowledge does not testify to their industry or opportunities, or whose intellectual calibre and general range, does not at all comport with this local development of talent in the direction to which taste has guided it.

On the other hand, many discoveries, important to the world, owe little to this peculiar talent. They depend upon a fortunate or accidental succession of events, encircling a comparatively moderate ability ; and then the magnitude of the invention may be much out of proportion to the degree of the inventive faculty. The invention of printing, perhaps the greatest in the scale of social importance, was but a division of the Roman printing block. Gun-powder, which happens to abbreviate warfare, was an unpremeditated invention. The discovery of Jenner has been attributed—1, to his talents ; 2, to his education under Hunter ; 3, to his situation in the vale of Gloucestershire.

I would not abate a leaf of the laurel to which the discoverer has an undisputed right ; and I shall presently indicate another quality, different from the inventive talent, which ranks high in intellect, and often compensates a discoverer for this talent. I wish here to show that a discovery of great practical importance may result in part from good fortune ; from the first occupation of a ground ; from perseverance in a particular direction, or from some other adventitious circumstance ; that its magnitude and importance may be out of proportion to the character of the intellectual processes invested in it ; and that it has happened that a discovery of immense practical importance to the human race, with good fortune to aid it, has involved but an inconsiderable intellectual pang in its creation ; and in consequence, that any *a priori* reasoning upon the mode of its creation, has very little connection with what may well be a question of pure fact.

Having thus considered the intellectual qualities concerned in the in-

vention, I pass to the progress of the invention itself, and to a consideration of its successive steps. These consist, first, of the suggestion; and, second, of the generalization.

Perhaps the most fertile source of error in the history of invention, grows out of a misappreciation of these two stages of discovery. Yet they can be shown to differ widely, both in their character, and in the credit they deserve.

There can be no doubt that unless invention be a result of pure accident, suggestion always precedes it. It has been often distinctly recorded, in connection with the greater inventions and discoveries. Thus the vertical spindles of an overturned spinning wheel, suggested the jenney to Hargreaves. Iron rolling suggested the drawing of cotton by rollers to Arkwright, who thus re-invented the machine (ignorant of Wyatt's previous invention); the valves of Fabricius, the circulation of the blood; and so on.

In such cases the inventor abstracted from the individual instance, some inherent element, the applicability of which to other instances, he alone saw. Hargreaves saw the value of a vertical position to spindles; Newton, of the force which attracted the apple; Harvey, of the idea that venous blood could run in only one direction; and they generalized this element in re-applying it.

It does not modify the truth of this proposition, that the first suggestion or experiment should yield a new result; that instead of a falling apple, it should be the contraction of a frog's leg, or an unpremeditated pustule on the hand of a Gloucestershire milkmaid. Such facts were still suggestions and not discoveries; and were new only in the aspect they received from the mind whose key-note they struck; new because attention was then first drawn to them in a new relation, and not new in their actual occurrence.

And the suggestion varies in its suggestive power, both from its own character and from that of the mind it works upon. The apple fell, and Newton alone abstracted a principle in behalf of the moon. Horace Wells says, and I believe first—"Reasoning from analogy, I was led to believe that surgical operations might be performed without pain, by the fact that an individual, when much excited from ordinary causes, may receive severe wounds without manifesting the least pain; as, for instance, the man who is engaged in combat may have a limb severed from his body, after which he testifies that it was attended with no pain at the time. And so the man who is intoxicated with spirituous liquor, may be treated severely without his manifesting pain." \* \* \* By these facts I was led to inquire if the same result would not follow, by the inhalation of some exhilarating gas." And it is well known that he tried the experiment, with various results, upon himself and others, in November, 1844. And yet the philosopher Seneca makes the remarkable observation—"That which presses hard upon you, and is very urgent, if you begin to withdraw yourself, will certainly pursue you and fall heavier. If, on the contrary, you stand your ground and seem resolved upon opposition, you will drive it from you. How many strokes do boxers receive on

the face and whole body ! Yet a thirst of glory makes them regardless of pain."

To Seneca it suggested nothing ; but to Wells, a principle.

A suggestion derived from one or two instances, becomes an invention only when its important element is abstracted and actually re-applied ; and it will be soon seen that the abstraction itself, the supposition, the theory, without this actual re-application, amounts to nothing ; and that for every actual and successful re-application of a newly-appreciated phenomenon, there have been innumerable claims from those who suspected that such re-application might be made, but did not actually make it ; who mistook a single truth for a universal truth ; suspicion for certainty ; theory for fact.

It will be found, by reference to the histories of discoveries, that the suggestion and generalization have occurred almost invariably in the experience of one and the same individual. Though it is quite possible to conceive that while the suggestion occurred to one individual, he might transfer it for generalization to another individual, yet I am unable to find any instance in which this has occurred. On the contrary, the suspicion, the groundwork of the hypothesis, has generally stimulated and goaded the possessor, until he was able to convert it into fact. The suspicion has been then established ; or, much more frequently, has not been established. It has proved erroneous ; hope has not been realized, and the discovery has turned out to be no discovery. Watt, whose name is identified with the history of steam, and the soundness of whose practical views no one will dispute, speaks of "the cast of a die. For," says he, "in that light I look upon every project that has not received the sanction of repeated success."

This transfer of a suggestion, a theory, unconfirmed by fact, or relying upon one or two facts alone, is, as I have said, quite possible. It would then have the character of a ticket in a lottery which should be thus transferred, with which the recipient may draw a prize, but which is far more likely to turn up a blank.

But especially in great discoveries the theory has not been thus made over to a second party. The perceptions of the inventor, keen upon this point, have enabled him to discern its value, and he has allowed himself no rest, no interval, in the steady prosecution of his task.

I have alluded to a second quality which contributes to discovery. The inventive talent lies at one end of the intellectual vibrations. At the other extreme is a high quality which elaborates another element ; while the invention itself is the electric flash which results from the contact of the two.

Here let me do ample justice to the mind of Jenner, which I do not find to have been especially characterized, in his biography, by the inventive genius. It did possess, as an equivalent, the power of appreciating the importance of a discovery ; and it was in this power and in the perseverance that resulted from it, and indicated it, that I recognize his chief merit. Jenner comprehended that vaccination would considerably prolong the average of human existence. A breadth of view, a

simultaneous consideration of many circumstances, with ability to reason justly upon them ; in short, a very clear conception of the whole subject, could alone afford the notion of importance or necessity which was to become the stimulus and proximate cause of the discovery. Few minds are capable of becoming so imbued with the importance of a merely possible result, as to permit it to divert the current of daily life. Such men are pointed at as having one idea ; their wisdom is questioned ; they are the butt of ridicule. And when the result demonstrates the accuracy of their convictions, we may fairly bow at once to their discernment and understanding, whether it detected a possibility, or comprehended a necessity which others overlooked.

At this point let us pause to make a distinction of cardinal importance. We have hitherto considered the qualities of the inventor's mind, and the successive steps of the process by which it accomplishes its end. Another element now complicates the problem. The invention is to go forth to the world ; and to establish certain relations between the world and the discoverer.

Up to this point it is quite obvious that an invention may be made, that it may grow from an original hint into a theory, which again may be confirmed beyond a doubt, by the test of repeated experiment, and yet that the whole process may be confined to the inventor's mind ; to his own cognizance. So long as he thus retains it for his own benefit or for that of a few friends, does the world stand in his debt ? Clearly not. The demonstration of the world to an inventor is a demonstration of gratitude and honor—gratitude for the donation of a great invention, honor to intellectual ability. To the latter it is conceded in the case of certain astronomical discoveries, for example, not immediately concerned in the direct welfare of mankind ; but the product of vast and recognized intellectual power.

But when a discovery becomes great, not from the character of the intellect invested in it, but from its immediate applicability to the amelioration of the condition of humanity, then the gratitude and honor conceded by the world is a mere equivalent for value received. The world will not concede this gratitude until they have received the value. They will only concede it to the source through which they receive it, and they will examine very closely the claims of those who may claim to have acted as agents in the matter.

To investigate this last position further—The world is to bestow a large reward in honor and in gratitude, but requires indisputable evidence of merit on the part of the recipient. It is prejudiced against *ex post facto* claims ; because it naturally argues, first, that one who had made the invention and appreciated it, would in anticipation of this honor, grateful to all men, have published his invention when he made it ; and secondly, that although such *ex post facto* claimant be a real inventor, yet he is so only in relation to himself or those with whom he has communicated ; and as he either could not, or did not, make the world at large feel the full value of it, so they owe him nothing. Such is ample reason for the world's prejudice against such claims.

This suspicion of inventors who do not appear until after the world has been made to recognize a discovery, is also justified by the remarkable fact that hardly an invention of importance was ever made known, that it was not at once claimed; often simultaneously from a variety of sources. It is perfectly natural that it should be thus claimed. The world, whether in science or in art, is built up to a certain point, by the easy and wide transmission of knowledge, and upon this elevation stand a multitude of philosophers, engaged, often, in identical researches, and who will be possessed of much information upon the subject to which a discoverer first gives utterance. The world is then liable for a short time to confound their claims, to confuse the perfect with the imperfect knowledge; the incomplete result of few facts with the complete demonstration from many; the unproved with the indisputable; theory with fact. But the law of the land has left no doubt upon this point. Before ceding a patent, it first identifies a discoverer. Here is an opinion from the clear head of Judge Story. "He is the first inventor in the sense of the act, and entitled to a patent for his invention, who has first perfected and adapted the same to use; and until it is so perfected and adapted to use, it is not patentable. An imperfect and incomplete invention, resting in mere theory or in intellectual notion, or in uncertain experiments, and not actually reduced to practice, is not and cannot be patentable under our patent acts. In a race of diligence between two independent inventors, he who first reduces his invention to a fixed, positive and practical form, would seem to be entitled to a priority of right to a patent therefor."

And the actual history of discovery and invention is conclusive upon these points. The world, if it has doubted awhile, has always been right in the end. *The man who has first generalized the proposition, and first made the world allow that it was thus generalized, has been the inventor.*

About 1750 one Sultzner published an account of the peculiar taste, arising from the contact of bits of silver and of lead with the tongue. Forty years after, Galvani brought metals in contact with a frog's leg. In each case a hint was received; Sultzner published it, but the world were not impressed with its importance. Galvani pursued the hint with numerous experiments; demonstrated that the phenomena resulted from a new modification of abstract force; compelled the world to recognize it, and was the discoverer.

The young countrywoman at Sodbury said of smallpox, I cannot take that disease, for I have had cowpox!—The Duchess of Cleveland said she had no fear about her beauty, for she had had a disorder which would prevent her from ever catching the small-pox. Were these discoverers? No. They furnished the isolated hint, and made no farther experiments. Jenner, with infinite energy and perseverance, through many successive years, in spite of ridicule, at last proved, not that cowpox might protect the system, but that it always would thus protect it, and that it was safe. He generalized the single fact, and was a discoverer.

Many experimenters raised their voice to say that they, too, had wiped up acids with a towel which had then burned like powder. Schonbein

was the first to make the world allow that cotton, treated by a certain process, always would thus burn.

The Abbe Nollet suspected the identity of the electric fluid and of lightning, and experiments were made in France. Franklin, braving the ridicule of failure, flew his kite, and by this and subsequent experiments with a lightning rod, he proved that the electric fluid was thus identical.

Adams made a calculation with regard to the existence of a new planet, and could not or did not compel the world, through the astronomer royal, to listen to him. Leverrier calculated a result, compelled the world to recognize its intrinsic greatness, and the magnitude of his own mathematical power, and was the discoverer. Jonathan Hull, the Abbe Arnal, the Earl of Stanhope, Franklin and others, proposed to propel boats by steam. They tried it, and failed to persuade the world of the expediency or value of the method. Long after, Fulton, impressed with the immense importance of the subject, made a long series of experiments and calculations, discerned the cause of previous failures, persevered through inconceivable difficulties, and in the face of ridicule he felt but did not yield to, demonstrated a proposition; not that steam, a long recognized power, might be made to move a boat, but that it could do so efficiently and profitably. He first compelled the world to recognize this great fact, and was the discoverer of this abstract truth, and the inventor of a profitable steamboat.

Hooke distinctly stated that the planets would move in straight lines if they were not deflected by central forces; and that the central attractive power increases, in approaching the centre, in certain degrees dependent on the distance. In conversation he even averred that he had solved the problem; and when the doctrine of gravitation was published, he asserted that he had discovered it before Newton. Newton showed this attraction to be according to the inverse squares of the distance, and was the discoverer of gravitation.

A hundred other instances might be cited to show that the man, to whom the original hint occurs, is not the inventor; nor yet he who forms a theory upon this hint; nor even he who publishes this theory, if he does not convince other people of its truth. This last may readily occur. A man may happen upon a fortunate theory, and yet not appreciate its value; so he gives himself no trouble to proclaim it; or perhaps his proofs are not conclusive, and the world will not believe. Goethe knew this when he said, "many things may be discovered and made known for a long time without producing any effect on the world, or the effect may be wrought without its being observed; wrought and yet not take hold of the multitude. This is the reason why the history of inventions is so surrounded with strange riddles."

Now, if there is any one point which has identified the true inventor's mind, it has been an invincible determination to compel the world to recognize the reality and value of its invention. The inventor saw it himself when other men could not, and he determined that other men should see it, and he accomplished his determination. "He," Sidney Smith says, in the *Edinburgh Review*, "is not the inventor who first says

the thing, but he who says it so long, loud and clearly, that he compels mankind to hear him."

Recognize this point, and the question of invention is comparatively simple. Yet it is not recognized. There is no abatement of claims to previous invention. The writer of a Life of Fulton well says—"Those who question Mr. Fulton's claim are precisely those who have been utterly unsuccessful in their own attempts; and it would seem that exactly in proportion as their efforts were abortive, and as they had thrown away money in fruitless experiments, their claims rose in their own estimation, and that of their partizans." And the witness, I believe before the House of Commons, probably did not overstate the matter when he gave it as his opinion, that if a man were to show that he had found a road to the moon, his neighbors would testify, that, if they had not been there themselves, they knew several individuals who were familiar with the road in question.

The above remarks have been made with the intention and desire of presenting the authority of precedent with impartiality. I have wished that the reader should not lean to one or the other side of the ether controversy, until all these considerations were presented. It remains to show their bearing upon the gist of the evidence contained in the statements which have been made in behalf of Dr. Jackson and Dr. Morton. The remarks alluded to bear upon three principal points.

1. The character of the mind and education required for discovery.
2. The suggestion of the discovery.
3. The generalization of this suggestion.

1.—This community is familiar with the great scientific talent and attainment of Dr. Jackson. Dr. Morton has acuteness, ingenuity, zeal, and perseverance. The discovery is not of a character to have demanded extensive scientific acquirement, and it is probable that either Dr. Jackson or Dr. Morton might have made it.

2.—The suggestion occurred to Davy, Jackson, Wells, Morton, and many others. Horace Wells seems to have conceived this hypothesis more distinctly than any other individual. So persuaded was he of its probability, that he made several experiments; and even made a journey to the Medical Class at Boston, before whom, however, he entirely failed to verify his theory. He then abandoned it, until it was confirmed by Dr. Morton. Dr. Jackson fails to prove that Dr. Morton was ignorant of the hypothesis, until he suggested it to him, because Dr. Morton shows by the evidence, that he was not so, at the intervals either of three months, or of three days, before their interview.

3.—I have shown that he who verifies the suggestion is the real discoverer. Dr. Morton, according to the evidence in, generalized this discovery. He verifies the suggestion, from whatever source it emanated. He made and modified the experiments at his own discretion. He assumed the responsibility of danger. He first conclusively demonstrated of ether—*1, that it would always produce insensibility to pain—2, that it was safe.* These two points constitute the discovery.

To show that Dr. Morton was only a "nurse"—an instrument of pre-

established knowledge—such knowledge must be proved to be pre-established. It is impossible for human reason to infer, upon the experiments put in evidence by Dr. Jackson, either that ether was—1, universal in its effects, or—2, that it was safe. It must, therefore, be argued that this knowledge was not pre-established—that Dr. Morton was not a mere administrator, but that he was an originator.

4. Lastly—Many may have been the real discoverers of ether insensibility to pain, and at a remote period. But if so, they have kept it to themselves; and they will be known as discoverers only to themselves. The world has always honored that individual among such discoverers, who presented his discovery to them. Dr. Morton was, according to the evidence in point, both the prime mover and the immediate agent in the introduction of this discovery to the world.

[To be continued.]

#### **THE ORIGINAL APPLICATION OF A SOLUTION OF COTTON TO SURGERY.**

*To the Editor of the Boston Medical and Surgical Journal.*

DEAR SIR,—The gratification concomitant on the discovery or successful application of any new agent in medicine or surgery, is almost invariably marred by a controversy from some quarter for the claim of priority. I regret to observe this to be the case in my own instance, and doubly so, as in my opponent I recognize a friend; I am therefore reluctantly compelled to reply to a communication in your last Journal from the pen of S. L. Bigelow.

I shall, in doing this, confine myself strictly to a refutation of his claims, and a substantiation of my own. It is needless to criticize any minor points in this discussion—avoiding those, I shall content myself with showing, by his *own statements* and *my evidence*, that Mr. Bigelow is in error, when he asserts that he applied a solution of cotton to surgery previous to myself.

Mr. Bigelow states that "his plaster cast was varnished between the third week in January and the end of the first or early in the second week in February, 1847," and he asserts "I did not furnish my friend, Mr. Maynard, with it until after I had myself used it as a varnish for this plaster cast." He evidently means by the expression "after he had used it as a varnish," after he had *finished varnishing* his cast, which by his own statement was at the end of the first or early in the second week in February, 1847. To show that Mr. Bigelow is mistaken when he asserts that he did not furnish me with it before that time, I insert the following letter from Mr. Waldo Maynard, of the firm of Maynard & Noyes.

Boston, April 4th, 1848.

DEAR JOHN,—I have your note asking me if I remember when you first informed me of having discovered the applicability of the "cotton solution" to surgery. I am unable to fix the date exactly, but remember having had several conversations with you at various times about it

prior to leaving home on my southern winter tour, which I find by reference to our books, was on the 4th of February, 1847.

In haste, affectionately yours, W ALDO.

That letter settles the fact that I had received the varnish and surgically used it, *previous* to early in the second week or at the end of the first week in February, 1847. I find from Mr. Bigelow's *own statements* that he does not pretend to have made a *surgical* use of a solution of cotton himself before the 20th of January, 1847, and possibly not before the forepart of February, inasmuch as he conclusively shows that he did not use it as *varnish* before the 20th of January; though until his paper appeared I had always *inferred* that it was at an *earlier* date than is shown by his own statement. He states that "I received a leg on the evening of the 2d of January, 1847. Delays consequent upon my inexperience made it *some days* before a fit cast was obtained." How many days he includes in "*some days*" I am unaware—probably three, —certainly two. Since he wrote that paper he has personally assured me that he did not *commence* making a cast until *Monday, the 4th of January*, 1847. Now, then, allowing "*some days*" to mean only *two* days, it will be the *sixth* of January before he obtains a "*fit cast*." He adds, "The drying of the cast was very gradual, detaining me from varnishing it, *two weeks*, if not a *longer time*." Two weeks or longer added to the 6th of January make it the 20th of January, or *later*, before he *began* to varnish the cast, which was "*the only article* he ever varnished with this solution," as he states in the same paper.

Before this admission, I had always believed he had already made use of the article as a *varnish*, when in Mr. Burnett's store he in my presence prepared some, soon after the 6th of January. That this was the *period* of that occurrence, *my memory* assures me, as well as his *own words*. In his paper of March 22, he says, "I learned the manner of preparing the varnish from Dr. C. T. Jackson, in December, 1846, or January, 1847, and for that purpose prepared a bottle *soon after*." In a letter to me of April 5, 1848, he writes, "My first bottle of the solution was made at *Burnett's*." I am also positive of that fact, for I there saw him prepare that bottle, and at the time asked him to spare me a portion, to which he consented.

Now, then, not only to *assert*, but *prove* that at that time or soon after he supplied me with it—

1st, I never received any from any *other* source, nor had I myself *made* any *previous* to my first application of it to surgery.

2d, I had made a *surgical use* of it as early as the *middle of Jan.*, 1847, and had *mentioned* the fact to *others* on or before the 17th of January.

To prove this to be not an assertion merely, I will add a letter from Dr. Whitney, one of the first whom I apprised of my discovery.

Dedham, April, 14, 1848.

To J. P. Maynard.

MY DEAR SIR,—I have just received your note, in which you wish me to inform you of "*the exact period*" in which you first communicated to me the fact of your having applied to "*surgical purposes an eth-*

*real solution of cotton.*" I am sorry that I cannot give you the *exact information* which you require. The occasion, however, on which you first spoke to me of this matter, I remember well. I remember, too, the opinion you expressed in relation to its applicability to surgery, and the fact of your having then, already, in one or two instances, so applied it. This information you imparted to me during a ride to Walpole in the month of January, 1847; and by reference to my memoranda, this must have been upon the 9th or the 17th day of the month; I am unable to decide upon which of these two days. By refreshing your memory with the circumstance of our visit *you* may be able, perhaps, to fix upon the "*exact date.*" That it was upon one of the above-mentioned days I am sure.

You at the same time spoke of having received "the solution" from a fellow student, a short time previous to this, to be used as a varnish; and that while using it as such, you discovered, by accident, its remarkable adhesive properties; and that it was this circumstance which first suggested to you the idea of applying it, as a dressing in surgery. Such are the main facts, so far as my knowledge extends, which relate to the "*exact period*" in which you first made use of an "*ethereal solution of cotton,*" and in which you first applied it to the purposes of surgery.

Very truly your friend and ob't serv't, SAMUEL S. WHITNEY.

I think I have now sufficiently shown that there is no foundation for Mr. Bigelow's claim, which appears to rest entirely on the erroneous opinion that he did not furnish me with any of the varnish, before the end of the first week in February or early in the second week in February, 1847.

I will here incidentally remark, I do not mean to imply that Mr. Bigelow would assert anything which he did not honestly *think* consistent with truth—I only wish to show his *memory* to be at fault. Had he consulted with me, and compared notes, before any printed discussion, no doubt our controversy would not have occurred, and I should have avoided this public substantiation of my right to the original discovery of the applicability of a solution of cotton to surgery.

Boston, March 18, 1848. JNO. PARKER MAYNARD.

I have not, in the above, expatiated upon many corroborating circumstances which full justice to myself might demand, as they might be uninteresting to the majority of your readers, and not being absolutely necessary they are superfluous. I reserve them for another time and place, if the foregoing reply be not deemed conclusive. J. P. M.

## THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, APRIL 26, 1848.

*Claims of Homœopathy as a System.*—In December last, a discourse was delivered before the Medical Society of Louisville, Ky., by Henry Miller, M.D., one of the Faculty of the University of that city, which has recently come under our notice, and which called up a fresh train of thoughts in regard to this subject. Dr. Miller makes an examination of the claims of homœopathy—and, according to his analysis, these claims are few indeed. After following the arguments from point to point, on the twenty-third page we find the gist of the whole matter. We accord to Dr. Miller the praise of fairness in the discussion, and the most violent sticklers for Hahnemannism cannot accuse him of vindictiveness of spirit towards them or their philosophy. The following is a quotation from the lecture.

"But, although homœopathic doses of medicines are nothing, absolutely nothing, and are in themselves incapable of doing either good or harm, it does not follow that those who prescribe them exert no agency whatever in the removal of disease. The rigid diet, enjoined by them, in conjunction with their remedies, together with the faith and hope inspired by their confident assurances—assurances, which are ever in the inverse ratio of knowledge—do much to enliven the sanative powers of nature, and thus contribute to the removal of disease. No physician is or ought to be ignorant of the influence of the mind upon the body, in health and in disease, and to direct this influence aright is no small part of his duty, in his intercourse with the sick. At the same time, it must be admitted that he who employs this instrumentality alone, while he attaches importance to the punctual administration of *nihilities*, is a charlatan—an unconscious charlatan, if you please, provided he veritably believe in the healing virtues of his medicaments. There may be such sincere homœopathists; but we cannot help suspecting there are some, who find themselves in the same predicament, as, Cicero tells us, did a certain class of religious teachers in Rome, who could never look into one another's faces without laughing."

*Obstetrical Remembrancer.*—Some months since, a copy of a very small, but richly filled 12mo.—containing Denman's Aphorisms on Natural and Difficult Parturition, the application and use of instruments, &c., augmented by Michael Ryan, M.D., and further enlarged by Thomas F. Cock, M.D.—was received from N. York. The publishers, Messrs. S. S. & W. Wood, conferred a favor on those who have not the time for studying the larger class of obstetrical works, when they gave them this book. It contains truth in a nutshell, without omitting any essential facts, on a knowledge of which depends the successful practice of the art of midwifery. A second examination impels us to express the pleasure we have derived from such diminutive pages. This satisfaction was enhanced, from not having expected much.

There is a singular variety of opinions among medical men of the first respectability, in regard to the theory and practise of midwifery. Some

assert that it is not the province of the physician to meddle with nature's affairs in the matter of childbirth, under any circumstances. They declare that there are no exigencies which the law of the animal economy does not provide for, and hence all manipulations are positive violations. Without stopping to discuss a physiological proposition, it is certain that another set of practitioners are the antipodes of the first mentioned; they are perpetually endeavoring to assist dame nature. Out of these conflicting sentiments, have grown up all varieties and shades of practice—from that of doing too much, to the doing of nothing at all. But as it is always safe to avail oneself of the treasured experience of the wise, we respectfully recommend this condensed treatise, because it will correct the evils peculiar to both sides of the question, if the reader is influenced by the arguments and facts that are adduced.

*New York Lying-in Asylum.*—Edwin B. Stimpson, M.D., is spoken of in the twenty-fifth annual report, recently from the press, as "our excellent physician," which is an indication of the satisfaction the managers have in his administration of the affairs of the institution. Since the last anniversary meeting, one year ago, 106 have been admitted to the Asylum, 95 of whom became mothers, and, without a single exception, every one of them recovered speedily. Since opening the Asylum, twenty-five years ago, it appears by the records that 1982 were admitted, among whom were 9 deaths. This speaks well for Dr. Stimpson, and shows that he may with propriety be called the excellent physician.

There is a board of physicians, of which the late Dr. Washington was one, by whom the resident medical officer is appointed. A large visiting committee of ladies, of the highest respectability, watch over the charity with a degree of vigilance and care that evidences their solicitude to sustain the Asylum with the whole weight of their influence.

Boston has the benefit of a lying-in hospital upon the same general principles—which is admirably conducted, and never can be otherwise than a blessing in this great city, while the ladies watch over its concerns as they always have since the day of its establishment.

*Dr. Shipman's Address.*—Readers of the Journal are familiar with the name A. B. Shipman, M.D., of Cortlandville, N. Y., Professor of the Principles and Practice of Surgery at Laporte, Ind., who is laboring with a zeal that never tires, to lay the foundations of medical science in the far West on a broad and enduring basis. A lecture now before us, delivered at the opening of the annual lecture term, and published by the class, abounds with beautiful thoughts and elevated sentiments, and must have been received with expressions of satisfaction by those for whom it was prepared. Long may the author live to point the way that leads to eminence and respectability in the practice of medicine and surgery—to personal happiness and public usefulness.

*Atresia Vagina.*—Dr. N. Hard, of the chair of Obstetrics and Diseases of Women and Children, in the Indiana Medical College, has been complimented by his class in having an introductory published. The subject was *atresia vagina*—or imperforation of the vaginal canal. Dr. Hard

gives a history of cases abroad, his own views, and, finally, describes each step of an operation. It is practical knowledge, without parade or show, and convinces us that the Professor has an accurate and scientific knowledge of the branches he teaches with distinguished honor to himself and the College with which he is associated.

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*Graduates in Indiana.*—At a recent commencement of the Medical College at Laporte, Indiana, twenty-seven gentlemen were admitted to the degree of Doctor of Medicine.

John O. Shipman, M.D., of Fayetteville, Oneida Co., N. Y., was admitted as an honorary member of the institution, and the Honorary Degree of M.D. was conferred upon the following gentlemen:—

David Jennings, of Lafayette, Indiana. John F. Wallace, Franklin Co., Ia. Ira F. Packard, Sturgis, Mich.

Professor A. B. Shipman, who delivered the valedictory address to the class, did credit to the institution with which he is connected.

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*Salubrity of Philadelphia.*—The able editors of the "Western Journal of Medicine and Surgery," infer, from the fact that but two medical students in a class of 406 have died there during the last season, that Louisville is signalily healthy. What then must be the healthfulness of Philadelphia, when only two had died up to the 1st of March last in about 1200. The catalogues of the University of Pennsylvania and the Jefferson Medical College have alone been published. In these two schools of the five, there were nearly one thousand students.—*Med. Examiner.*

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*New Books Received.*—A Dispensatory and Therapeutical Remembrancer, &c. By John Mayne, M.D. Revised, with the addition of the formulæ of the United States Pharmacopœia. by R. Eglesfield Griffith, M.D. Published by Lea & Blanchard, Philadelphia.—Practical Observations on Certain Diseases of the Chest, and the Principles of Auscultation, by Peyton Blackiston, M.D., &c. Published by the same house.—Manuals on the Blood and Urine, by John Williams Griffith, M.D.; G. Owen Rees, M.D.; and Alfred Markwick, M.D. A truly valuable volume, also published by Lea & Blanchard.—Elements of Natural Philosophy, being an experimental introduction to the study of the physical sciences. By Golding Bird, M.D. Published by Lea & Blanchard.

These are first class works, strongly marked in character, and therefore deserve the close attention of the reader. We shall proceed to an examination of each with reference to their claims to the attention and confidence of medical men, for whom they were particularly designed, with the exception of the last.

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*To Correspondents.*—The following communications have been received. The Report of the Surgeon of the Steamer Mississippi; a paper on Winter Resorts for Northern Invalids; Prof. Knight's case of Popliteal Aneurism successfully treated; Dr. Chandler on Medical Culture; Dr. Thayer's Letter.

An extra sheet of four pages is sent out with the present number of the Journal. Readers will do well to secure it in its place before it is lost.

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*MARRIED.*—At Laporte, Indiana, Dr. Eli S. Penwell to Miss L. Catha.

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*DIED.*—At Saratoga, N. Y., Dr. U. S. Ling, 29, formerly of Portland, Me.—At Bristol, Conn. Dr. Titus Merriam, 80.—On board the U. S. S. North Carolina, at New York, Dr. John Frederick Sickles, Surgeon, 35. While in conversation he instantly expired—disease of the heart.

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*Report of Deaths in Boston*—for the week ending April 22d, 70.—Males, 33—females, 37.—Stillborn, 10. Of consumption, 17—typhus fever, 2—lung fever, 4—scarlet fever, 3—infantile, 6—old age, 2—disease of the bowels, 1—disease of the heart, 6—intemperance, 2—inflammation of the lungs, 3—dysentery, 6—convulsions, 1—worms, 7—inflammation of the brain, 1—cancer, 1—marasmus, 2—dropsy on the brain, 2—abscess, 1—inflammation of the bowels, 1—hooping cough, 1—erysipelas, 1—teething, 1—disease of the nose, 1—strangury, 1—ulcers, 1.

Under 5 years, 25—between 5 and 20 years, 6—between 20 and 40 years, 19—between 40 and 60 years, 11—over 60 years, 9.

**Medical Miscellany.**—Of 100,000 emigrants, says the Liverpool Mercury, who lately crossed the Atlantic for America, 6000 perished during their voyage, 4100 on their arrival, 5200 were sent to the hospital, and of those who settled in the towns 1900 died.—The number of Medical Students attending the different Institutions in Philadelphia, during the last winter, is said to exceed 1200.—Dr. Simpson, of Scotland, has computed that of 300 surgical operations performed with ether and chloroform, fewer proved fatal than is usual in the same cases without these agents. Of 1088 cases of amputation of the thigh, without an anaesthetic agent, 44 in 100 died; out of 135 cases, with ether or chloroform, 33 only died, or 24 in 100.—Dr. R. T. Underhill, of New York, has a vineyard of twenty acres of Isabella and Catawba Grapes. He annually sends to New York market several thousand baskets of grapes that command nine dollars per hundred pounds, or about five dollars per basket.—Messrs. Kretchman and Gildea have manufactured an imitation hand, the fingers of which being formed by an ingenious combination of springs and levers, will enable the wearer to move them by the action of the shoulders, so as to grasp and retain any object they might desire to hold in that hand. This invention is admirably calculated to supply in a measure the loss of a hand to those who have been so afflicted by the fortune of war or through accidents.—The Homœopathic College in Philadelphia, has now been authorized by the Legislature to grant diplomas.—The number of persons wounded in France in the three days of February, and received at the hospitals, amount to 628, of whom 610 were men, and 18 women. Of that number 253 still remain in the hospital.—Remarks by a Surgeon of the U. S. Navy, on the Marine Hospital Fund, which appeared in the *Medical Examiner*, have now assumed the form of a pamphlet.—The address of Dr. Deming, Professor of Materia Medica in the Indiana Medical College, reads admirably well. The Institution has secured, in its present faculty, a combination of talent and mental energy, that argues well for its future influence and glory.—In Simpson's Journey round the World, he mentions a woman, now living at Woahoo, Sandwich Islands, who, although but 12 years of age, has had three children.—The last number of the Quarterly Transactions of the College of Physicians of Philadelphia, contains, among other valuable papers, one by Dr. Parrish, on etherization in tetanus.

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**ELECTRICAL ROOMS, 19 TEMPLE PLACE.**—Boston, Jan. 1, 1848.

AVOIDING newspaper notoriety, still I may be allowed, through the Journal, to "define my position." It is, to make Electrical Treatment, in all available cases, auxiliary to the regular Profession. I assume not the title of "Doctor," as it does not legitimately belong to me, and only receive it from my medical friends and others, as a matter of courtesy or convenience. I have no fellowship with boasting medical reformers, nor with quackery in any of its forms, and I must confess that even Electricity is not an infallible remedy for all the ills of life. This will be seen in my Report of Dec. 1, 1847, to which I would respectfully refer the Profession, as presenting useful data with regard to this agent. The Report shows the results of my practice in this city for three years and three months. It embraces 1174 patients, presenting 1760 cases, and 70 classes of complaints, with the average amount of treatment in each class. I am impressed with gratitude to a large number of the Profession in this city and elsewhere, for their kindness and confidence, and will endeavor not to abuse it. Many of my medical friends have found that patients, under electrical influence, have exhibited an increased susceptibility to medicine, and consequently had more rapid recovery under the combined treatment. My improved apparatus for the development and combination of Electricity, Galvanism and Magnetism, in a peculiarly modified form, makes its judicious administration, safe, agreeable, and unexceptionable, under any circumstances. Although too complicated and unwieldy to be portable, these improvements are invaluable to me for house patients. While observation in various quarters proves that an agent so powerful as Electricity cannot, in any form, be tampered with as a *family medicine*, nor by careless and inexperienced empirics, still, its judicious employment may often be of essential service, in connection with the medical skill of the family physician. Its injudicious use may aggravate a complaint, or arouse and develop some latent disease, requiring still more intelligent attention for its alleviation. It is therefore desirable that the Electrician may possess sufficient knowledge of these occasional phenomena, and the proper course of electrical treatment, not only to render these developments harmless, but cause them, aided by the intelligent physician, to subserve a beneficial purpose. The experience of all observing electricians must convince them that great caution and judgment are indispensable in managing complicated chronic cases, and make them feel the necessity of acting under the information and with the advice of the family physician; and therefore, the true and most honorable position for an Electrician is, an unassuming auxiliary to the medical profession.

Dec. 28—tf

JOHN B. CROSS, *Medical Electrician.*

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**INFIRMARY FOR THE CURE OF HERNIA AND ANALOGOUS DISEASES.**

The undersigned will continue to treat and effect a *speedy cure* of Hernia or Rupture, Varicocele, &c., by his new method of operation, under almost every variety of form in which they are presented to the care of the surgeon, without the use of trusses or suspensors. Irreducible hernia of long standing made reducible, and a cure accomplished in most cases. Patients from the country are informed that additional private accommodations have been recently secured for their convenience and comfort while under treatment.

Applications must be made at No. 9 Winter Street, or No 2 Exeter Place, Boston.

April 7—optif.

G. HEATON, M.D.